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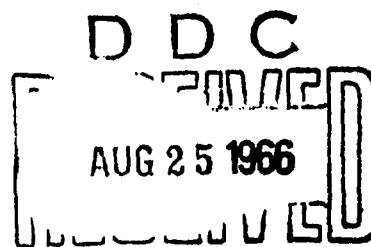
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TASK QUIZ II

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(9) RESEARCH MEMORANDUM

(6) AN EVALUATION OF THREE SCREENING  
PROCEDURES FOR INTERROGATION

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(15) DA-44-123-ARO-2

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#### Composition of the Research Team

The research Team consisted of Jerald N. Walker, Joanne J. Hood, and PFC Brian J. Bowden.

Hilton M. Bialek was Task Leader during the planning phase and John E. Taylor was Acting Task Leader during the execution and writing phases.

## BRIEF

4 The purpose of this experiment was to determine the relative effectiveness of three procedures for screening sources for subsequent interrogation. The procedures examined were: screening sources individually, in 4-man groups, and in 12-man groups. The criteria for effectiveness were (A) the accuracy of the decisions that sources warranted subsequent interrogation, and (B) the time required for screening a given number of sources.

The screeners were four trained interrogators. The sources were 288 enlisted men from the Combat Developments Experimentation Center (CDEC). The screeners' job was to determine whether sources did or did not have information about weapons and tactics studied by CDEC. The sources were cooperative.

→ It was concluded that screening is most efficient when sources are dealt with in groups of four. This conclusion was based on a time advantage for the 4- and 12-man procedures, equivalence of the three procedures for accuracy, and the interrogators' stated preference for screening 4-man groups over 12-man groups. It is restricted to the case where the interrogator is dealing with cooperative, enlisted sources, and has an EEI (Essential Elements of Information) approximating the degree of specificity of that of this study.

Finally, although substantial variation existed, the accuracy of the interrogators' screening appeared satisfactory.

A

## PREFACE

Task QUIZ began on 1 July 1961 in response to a request from ACSI for an investigation into the problems of collecting information via tactical interrogation. The Task is jointly sponsored by CONARC and ACSI. Initial exploratory work was reported in a Task QUIZ Research Memorandum,<sup>1</sup> dated May 1962. This Memorandum concluded with recommendations for a research program focusing on techniques for improving the amount and accuracy of information obtained from tactical interrogation. A subsequent experiment based on this recommendation was<sup>2</sup> reported in a Research Memorandum dated February 1963.

The present report describes an experiment conducted on the problem of screening sources for interrogation, an experiment receiving its impetus from recommendations of personnel at the Intelligence Center, Fort Holabird, Maryland.

1

Bialek, H. M., Walker, J. N., and Hood, Joanne J. Exploratory efforts concerned with a study of the interrogation process: survey activities, conceptualization and pilot studies. HumRR0 Research Memorandum, May 1962 (Classified).

2

Bialek, H. M., Walker, J. N., and Hood, Joanne J. An experimental approach to tactical interrogation. HumRR0 Research Memorandum, February 1963.

## CHAPTER I

### Introduction

The military problem of Task QUIZ is to add both to the practical knowledge of techniques of interrogation and exploitation of the individual and to the means of countering these techniques. One approach to this problem was examined in a Task Conceptualization<sup>1</sup> Paper by means of a schema depicting the interrogation process as having three stages: screening, manipulation, and information extraction. The function of the screening stage is to differentiate sources who have desired information from those who do not. The manipulation stage refers to the treatment of resistant sources judged to have information, in order to render them amenable to information extraction. The information extraction stage refers simply to the obtaining of information from sources judged to have information who are also amenable to questioning. The first QUIZ experiment was concerned with the manipulation and information extraction stages of the interrogation process. The research to be reported here deals with the screening stage: the differentiation of sources who have valuable information from those who do not. The impetus for this experiment arose from interest expressed in the problem by personnel at the Intelligence Center, Fort Holabird, Maryland.

The objective of this experiment was to determine the effects on interrogator screening effectiveness of differences in the number of

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<sup>1</sup> Task Conceptualization Paper, Task QUIZ, November 1962.

sources screened simultaneously. Screening effectiveness was considered as a function of both accuracy of an interrogator's decision (as to a source's possession of knowledge), and the time an interrogator spent in screening before coming to a decision. Three values of the number of sources screened simultaneously were examined: groups of 12 men, groups of 4 men, and individuals alone.

The general question which was investigated was whether screening effectiveness was increased by an interrogator's seeing more than one source at a time. A basic assumption was that the handling of sources in groups should enhance effectiveness, but only up to a point. Time spent per source was expected to decrease as a function of group size, but only to that point where sheer size of the group prohibited efficient treatment of its members. It was conjectured that such a point might be approached as the number of members approached 12. Accuracy of decision was expected to increase as a function of group size as long as the additional information elicited accruing with each source could be assimilated by the screener. It was expected that this condition might obtain with groups up to an N of 4. Accuracy would then be expected to decrease, as the additional information obtained not only could not be used, but actually would interfere with and be detrimental to the effective use of information already acquired. In short, for the conditions of this experiment, we predicted that:

1. Time, per source, would be less
  - a. for 12-man groups than for 4-man groups;
  - b. for 4-man groups than for individuals.

2. Accuracy of decision in regard to each source would be greater

- a. for 4-man groups than for individuals;
- b. for individuals than for 12-man groups.

The implications of findings for screening are readily apparent: if accuracy is equal between any two conditions then any significant difference in time obviously favors the condition requiring the shorter time, or, similarly, where time is the same for two conditions, that condition in which greater accuracy prevails is the more effective one.

## CHAPTER II

### Method

#### General

This experiment was set up so that four trained interrogators screened a total of 288 sources in four days. The interrogators' mission was to decide which sources warranted more extensive interrogation beyond the screening level. This decision was to be based on the sources' having or not having information about weapons and tactics studied by CDEC. Half of the men they screened were to have had such information, half were not. The interrogators, who were told that the sources would be cooperative, were free to use whatever techniques they cared to employ; and the sources, who were told simply that they were to be interviewed, were enjoined to answer the interrogators honestly and to the best of their ability.

#### Specific

##### A. Classification Criterion

It had originally been intended to base the classification of a source's having or not having sufficient information about weapons and tactics to be worthy of interrogation solely on his line or support job assignment. This scheme assumed that certain assignments (line) exposed their holders to such information, whereas other assignments (support) afforded their holders slight opportunity to acquire such information. (How assignments were classified is listed in Appendix 1.) Certain administrative considerations, however, quickly made it apparent

that this classification was inadequate. For example, some line sources had been assigned to CDEC just prior to the experiment, and hence were unlikely to have information in sufficient depth to justify their inclusion in an "information" group. Similarly, sources who had held support assignments in CDEC but had recently been switched to line assignments likely did not have time to acquire information in such depth. Because of such considerations, the classification criterion scheme was amended. In the "information" category were placed those sources who had held a line assignment with CDEC during at least one CDEC field experiment. In the "no information" category were placed those sources who either had never participated in any field experiment, or who, if they had, had held a support assignment at the time.

The amended classification criterion received considerable support from the sources' self-ratings of their knowledge about weapons and tactics. They had been asked to indicate on two different 5-point scales how much they felt they knew about weapons and tactics studied by CDEC. In both cases, the "information" sources rated themselves as having significantly more information than did the "no information" sources. (See Appendix 2 for rating scales and distributions of ratings.)

This classification criterion did not take account of the possibility that support personnel or relative newcomers might incidentally (e.g., by talking with friends) have acquired information such as to be justifiably categorized as having information. Nor did it take account of the possibility that line personnel in a CDEC experiment might be placed in a job or area where they would not have access

to critical information. Therefore, in all cases where an interrogator's decisions disagreed with the classification criterion, tape recordings of the screenings were examined to determine whether a supposed "information" source clearly denied all knowledge or whether a supposed "no information" source supplied information clearly indicative of possession of critical knowledge. In these cases, the interrogator's score was appropriately adjusted. Of 93 "errors" examined, 26 were changed to correct categorizations.

#### B. The Interrogators

Four trained interrogators functioned as the screeners: one captain, one first lieutenant, and two enlisted men. In order to obviate the possibility of differences occurring as a function of rank, all four men wore captain's insignia. Three were trained interrogators from a Military Intelligence Battalion at Fort Hood, Texas, and the fourth was an Interrogator, Prisoner-of-War (IPW) instructor from Fort Holabird, Maryland. They varied in age from 25 to 52 years; their time in service varied from approximately 3 to 19 years; and their experience as interrogators, beyond school, varied from no interrogations to hundreds of interrogations.

#### C. The Sources

The sources were 288 enlisted men from the Combat Developments Experimentation Center at Fort Ord, California. At the time of this experiment, half of them had line assignments (automatic riflemen, squad leaders, combat construction specialists, etc.), and the other half support assignments (clerks, chaplain's assistant, cooks, etc.).

#### D. Experimental Design

Each interrogator screened a total of 72 sources with the requirement that he classify each source as to whether or not he would send him on for interrogation. The independent variable of primary interest was the number of sources screened simultaneously. This variable assumed three values: individuals, 4-man groups, and 12-man groups. Each interrogator screened 24 sources under each of these conditions.

The second independent variable was the order of screening conditions for the interrogators. There were two orders, with an approximate balancing of conditions between them. One officer and one enlisted interrogator were randomly assigned to each order to prevent, in spite of all interrogators wearing the same insignia, the possibility of confounding rank with order.

The design called for half of an interrogator's sources under each condition each day to have line assignments, and for half to have support assignments; that is, half of the men to have information, half of them not to. This line-support ratio was maintained throughout the experiment; however, the ratio, in fact, of "information" sources to "no information" sources (on the basis of corrections noted in the classification criterion section earlier) more closely approached a ratio of one to three. Since this ratio was not completely controlled, it was necessary to determine whether or not it varied significantly between experimental conditions. Appendix 3 presents the number of sources experimentally classified as having information under each of the experimental conditions, and the Analysis of Variance summary

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table. Significance was attained with the Technique by Order interaction, only ( $F=15.88$ ,  $P<.05$ ). Since corresponding results were not obtained in any of the other analyses, it was concluded that differences in the "information-no information" ratio did not affect them.

Although the interrogators were instructed (see Appendix 4) that in the handling of groups they were free to proceed as they wished, one exception was that they not screen their sources sequentially, i.e., group screenings were not to be a series of individual screenings with an audience. Because of obvious difficulties in the establishment of an objective criterion (e.g., how many consecutive questions addressed to one individual constitute individual screening?), the reason for the instruction was explained to the interrogators, and they were asked to do their best to observe its spirit. In practice, this was frequently quite difficult for them to do. None of them had ever screened groups before, and their discomfort became apparent as the screenings were monitored. They were given an additional explanation and reminder on the second day of the experiment. Although they were still less than completely successful in avoiding sequential interviewing, the matter was dropped because of their apparent inability to do otherwise

#### E. Dependent Variables

Screening effectiveness was assessed both by accuracy of interrogator decision and by time consumed in screening.

1. Accuracy. The accuracy score consisted simply of the number of times an interrogator's classification agreed with the adjusted classification criterion.

2. Time. The screenings were timed so that a total time score was obtained which indicated how long an interrogator spent screening under each of the three conditions.

F. Administrative Procedure

The experiment ran for four days. Over this time, each interrogator screened 24 sources under each of the three conditions (12-man groups, 4-man groups, and individuals). On each day, each interrogator screened 18 sources, half of whom were line and half of whom were support personnel. On any given morning or afternoon, an interrogator screened either individuals (six men sequentially) or groups (either one group of 12 men or three groups of 4 men).

The interrogators were permitted a maximum screening time of fifteen minutes per source, i.e., fifteen minutes per individual screening, one hour per 4-man group, and three hours per 12-man group. They were free to use less time if they wished and in every case did so. They were told that all screenings would be tape-recorded.

The interrogators were given complete information about the experiment except for the classification criterion (see Appendix 4). At the conclusion of the experiment, they were thoroughly debriefed, and were solicited for comments on their reactions to the experiment.

The sources, prior to the screening, were told that they were simply to be interviewed and that they would be asked about their training, duties and military experience. They were told to answer honestly and to the best of their ability. (The complete text of their briefing is given in Appendix 5.) Thus, it was intended that

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sources be cooperative. Sources who had been screened were kept separate from those waiting to be screened. At the conclusion of each day, the sources were debriefed. (This text is given in Appendix 6.) Both their briefings and debriefings were given by the Military Chief of the Leadership Unit.

### CHAPTER III

#### Results and Discussion

This presentation and discussion of results is organized to answer three questions: how screening accuracy varied with the number of sources screened simultaneously, which screening condition was most efficient with respect to time, and, on the basis of these results, which screening condition was most effective.

Question 1. Was screening more accurate when sources were interviewed individually, in groups of 4, or in groups of 12?

The number and percent of sources correctly classified by the interrogators under the three conditions are given in Table 1, below. In each condition, the maximum possible number of correct classifications was, of course, 96. For example, of the 96 sources screened individually by the four interrogators, 66, or 69%, were correctly classified as meeting or failing to meet the requirements of the EEI (sufficient knowledge of tactics and weapons studied by CDEC to warrant interrogation).

Table 1

Number and Per Cent of Sources Correctly Classified by  
Interrogators under the Three Screening Conditions

| <u>Individual</u> | <u>4-man</u> | <u>12-man</u> | <u>Total</u> |
|-------------------|--------------|---------------|--------------|
| 66<br>(69%)       | 79<br>(82%)  | 70<br>(73%)   | 215<br>(75%) |

Two observations may be made in regard to the findings presented in Table 1. First, although there is room for improvement, the

interrogators' screening accuracy was substantial. Pure guessing would result, on the average, in 50% accuracy. However, the interrogators accurately classified 75% of the sources. (Within conditions, the accuracy of individual interrogators varied from 62% to 96%.)

Second, although accuracy was somewhat greater for the 4-man condition, there were, in fact, no significant differences between conditions. (See Appendix 7 for the Analysis of Variance Summary Table.) While differences in screening accuracy tended in the direction predicted, that is, the greatest screening accuracy obtained for the 4-man condition, differences between conditions are not sufficiently<sup>1</sup> reliable to conclude that genuine differences exist.

Question 2. Which screening condition was most efficient with respect to time?

Table 2, on the following page, gives the average number of minutes spent by the four interrogators in screening 24 sources under each of the three conditions. It is readily apparent that the interrogators spent much less time in screening groups than they did in screening individuals. (See Appendix 9 for the Analysis of Variance Summary Table.) On the average, each interrogator screened 24 sources

<sup>1</sup>

A description appears in Chapter II of how a final check was made of the classification criterion by reviewing the tape recordings of those screenings in which interrogators had made erroneous classifications of sources. The data presented in Table 1 and discussed in the text include corrections made on the basis of this check. Uncorrected data, i.e., with the classification criterion based solely on the sources' job assignment and participation in a CDEC experiment, are presented in Appendix 8 along with an analysis of those data. There it can be seen that the only effect of the corrections was to increase the number of accurate classifications fairly consistently across experimental conditions.

Table 2

Average Number of Minutes Spent by Four Interrogators in  
Screening 24 Sources under Each of Three Conditions

| <u>Individual</u> | <u>4-man</u> | <u>12-man</u> |
|-------------------|--------------|---------------|
| 170               | 98           | 83            |

individually in two hours and 50 minutes; 24 in 4-man groups in one hour and 38 minutes; and 24 in 12-man groups in one hour and 23 minutes. Both group procedures were significantly superior to individual screening. Although the 12-man groups required somewhat less time than the 4-man groups, the difference between them was not statistically significant.

We had predicted that time would decrease with increasing size of group screened up to a point--the point at which size of group became unwieldy from a practical standpoint--and conjectured that this size might be about an N of 12. This prediction was largely substantiated: significantly less time was required for the 4-man group than for individuals, and the statistical equivalence of the 4- and 12-man groups suggests the likelihood of the practical point of diminishing returns in increasing group size lying somewhere under an N of 12.

Question 3. In general, under what condition was screening most effective?

This question requires joint consideration of the answers to the two preceding questions. Since accuracy was essentially the same for the three screening conditions, and time was less for the groups, it is clear that the most effective screening procedure was the screening of

groups rather than of individuals. But as to which size group is better, it must be remembered that no statistically significant advantage accrued to either size investigated in this study. However, one interrogator said he preferred the 4-man condition; the other three said they preferred the individual condition. Two of the latter explicitly stated a dissatisfaction with the 12-man procedure because of the problems of control and of setting sources at ease in such large groups. In this way, the interrogators indicated that they were more comfortable screening the smaller groups.

On these bases, the 4-man group would appear to be the more desirable of the two group sizes.

A final word about these results should be added. As noted earlier, the interrogators had some difficulty in dealing with the groups as groups. It could be argued that their discomfort may have interfered with their screening efficiency. However, their screening accuracy under the group conditions was comparable to that under the individual condition. Nevertheless, it is conceivable that a group superiority on screening accuracy may have been masked by such an interference effect. It is, therefore, a reasonable hypothesis that interrogators well trained for the situation would be more accurate under group than individual conditions.

## CHAPTER IV

### Summary and Conclusions

#### A. Problem

The purpose of this experiment was to determine the relative effectiveness of three methods of screening sources for subsequent interrogation. The three methods investigated were: screening sources individually, in 4-man groups and in 12-man groups. The two indices of effectiveness were: accuracy of the screening decisions, and the amount of time required to screen a given number of sources.

#### B. Method

Four trained interrogators each screened 24 sources under each of the three screening procedures, i.e., a total of 288 sources were screened.

The interrogators' mission was to decide which of the sources had information about tactics and weapons studied by CDEC sufficient to warrant further interrogation.

The sources were enlisted men from the Combat Developments Experimentation Center. Those men who had line assignments while participating in a CDEC experiment were initially classified as "information" sources warranting further interrogation. All other sources were classified as "no information" sources. The validity of the classification criterion for sources erroneously categorized by interrogators was reviewed by examining the tape recordings, and revisions of the classification criterion were made where factual information supplied

in a screening made it necessary. All sources were instructed to cooperate with the interrogators.

#### C Results

1. The interrogators' screening accuracy was satisfactory. They correctly classified 75% of the sources, which is substantially better than the 50% correct which would be expected on the average by pure random guessing.

2. Substantial variation in accuracy existed. Accuracy varied from 62% to 96% for particular conditions and interrogators.

3. Although tending toward what was predicted, none of the three screening procedures had a statistically significant advantage as far as accuracy was concerned.

4. Interrogators screened their sources much more rapidly in both group conditions than in the individual condition. However, the group conditions did not differ significantly.

5. Interrogators preferred the 4-man procedure to the 12-man.

#### D. Conclusions

On the basis of the results of this study, it may be concluded that screening will be enhanced by handling sources in 4-man groups rather than individually. This conclusion is restricted to the case of cooperative enlisted sources, in which the EKI approximates the degree of specificity of that of this study.

# Appendix 1

## Classification Criterion of Job Assignments as Line or Support\*

|                                    |                            |
|------------------------------------|----------------------------|
| Aid Man                            | Command Vehicle Commander* |
| Aid Man, Senior Medic              | Commo Chief*               |
| Aid Man, Troop                     | Commo Section*             |
| Aid Station Attendant              | Comptroller                |
| Armor*                             | Computer F.D.C.*           |
| Armor, Ass't. (PFC)*               | Cook                       |
| Armor Military Specialist (Scout)* | Corpsman, Hospital         |
| Armorer (Company)*                 | Courts and Boards NCO      |
| Automatic Rifleman*                | Demolitions Expert*        |
| Baker                              | Dispatcher                 |
| Carpenter, Company                 | Dispatcher, Ump. Cont. Gp. |
| Chaplain's Assistant               | Driver                     |
| Clerk                              | Driver, 106RR*             |
| Clerk, Classif and Assign.         | Driver, M13*               |
| Clerk, Company                     | Driver, 1/4 ton            |
| Clerk, Correspondence              | Driver, 3/4 truck          |
| Clerk, Distribution                | Driver, Ambulance          |
| Clerk, Finance                     | Driver, Jeep               |
| Clerk, Flagging                    | Driver, Light Truck        |
| Clerk, Incoming Personnel          | Driver, Med. Jeep          |
| Clerk, Mail                        | Driver, Personnel Carrier* |
| Clerk, Mail Alt.                   | Driver, Scout*             |
| Clerk, Maintenance                 | Driver, Scout Jeep*        |
| Clerk, Medical                     | Driver, Staff              |
| Clerk, Message Center              | Driver, Supply             |
| Clerk, Parts                       | Driver, Tank*              |
| Clerk, Pay                         | Driver, Truck              |
| Clerk, Personnel                   | Duty Soldier               |
| Clerk, Personnel Morning           | Fire Marshal               |
| Clerk, Pro Pay Section             | General Supply Specialist  |
| Clerk, S-1                         | Generator Operator         |
| Clerk, Supply                      | Grenadier*                 |
| Clerk, Troop                       | Gunner*                    |
| Clerk, Typist                      | Gunner, Tank*              |
| Combat Construction Specialist*    | Gunner, 4.2 Mortar*        |
| Combat Demolition Specialist*      | Gunner, 81 mm*             |
| Commander, Tank*                   | Hotel Barracks Sgt.        |
| Commander, Tank, Ass't.*           | Leader, Ass't. Squad*      |

\*

An asterisk following a job assignment designates a line classification. Those assignments without asterisks were considered support.

Appendix 1 (Continued)

|                                       |                                |
|---------------------------------------|--------------------------------|
| Leader, Asst. Squad Scout*            | Radio Operator-PC10            |
| Leader, Ass't. Squad (Trans. Platoon) | Radio Operator (Plt. Commo.)*  |
| Leader, Fire Team*                    | Radio Operator, Table Console* |
| Leader, Scout Section*                | Radio Repairman                |
| Leader, Section*                      | Radio Repairman, Ass't.        |
| Leader, Section - Radar               | Radio Team Chief*              |
| Leader, Section (81 mm)*              | Radio Teletype Operator        |
| Leader, Squad*                        | Radio Teletype Team Chief*     |
| Leader, Squad (81 mortar)*            | Regimental Maintenance NCO     |
| Leader, Squad, Scout Section*         | Rifleman*                      |
| Leader, Squad (Trans. Platoon)        | Rifleman, Senior*              |
| Leader, Team*                         | Scout Light Driver*            |
| Loader, Tank*                         | Staff Chemical NCO             |
| Machine Gunner*                       | Stoveman and Fuel Repairman    |
| Machine Gunner Ass't.*                | Supply Sgt.                    |
| Mechanic                              | Supply and Weapon Room         |
| Mechanic, Artillery Track and Wheel   | Switchboard Operator           |
| Mechanic, Engineer                    | Tanker*                        |
| Mechanic, Track                       | Trainee, Personnel Specialist  |
| Mechanic, Wheel                       | Training NCO*                  |
| Medical Evacuation Team               | Training NCO, Ass't.*          |
| Medical Section Sgt.                  | Utility NCO                    |
| Mortar Crewman*                       | Utility Repair Work            |
| Motor Sgt.                            | Wire Chief, Brigade*           |
| Observer*                             | Wireman*                       |
| Observer, Forward*                    | Wireman, Field*                |
| Observer, Forward (81 mm)*            | Wireman, Sr.*                  |
| Observer, Scout*                      |                                |
| Personnel Admin. Specialist           |                                |
| Pharmacist, Ass't. (Dispensary)       |                                |
| Pioneer*                              |                                |
| PIO Specialist                        |                                |
| Platoon Sgt. Aggressor*               |                                |
| Platoon Sgt. (MG Company)*            |                                |
| Powerman                              |                                |
| Radar Operator                        |                                |
| Radar Technical Crew Chief            |                                |
| Radio Chief*                          |                                |
| Radio Mechanic, Sr.                   |                                |
| Radio Operator*                       |                                |
| Radio Operator (Intermediate Speed)*  |                                |

## Appendix 2

### Comparison of "Information" and "No Information" Sources' Self-Ratings of Knowledge about Tactics and Weapons

Sources were asked to rate themselves on the following two items, which were preceded by these instructions: "In your work with CDEC, you have learned about many things. On the lines below, circle the words which most closely describe how much you know about weapons and tactics studied by CDEC."

|        |  |                               |
|--------|--|-------------------------------|
| I know | nothing<br>very little<br>something<br>quite a bit<br>a great deal | about weapons studied by CDEC |
| I know | nothing<br>very little<br>something<br>quite a bit<br>a great deal | about tactics studied by CDEC |

### Frequency Distributions of Sources' Self-Ratings of Knowledge\*

|                               |                  | <u>Self-Ratings</u> |                        |                        |                        |                         |              |
|-------------------------------|------------------|---------------------|------------------------|------------------------|------------------------|-------------------------|--------------|
| Weapons<br>Tactics<br>Sources | <u>Sources</u>   | <u>nothing</u>      | <u>very<br/>little</u> | <u>some-<br/>thing</u> | <u>quite<br/>a bit</u> | <u>a great<br/>deal</u> | <u>Total</u> |
|                               | "Information"    | 7                   | 21                     | 37                     | 21                     | 5                       | 91           |
|                               | "No Information" | 59                  | 54                     | 33                     | 9                      | 4                       | 159          |
|                               | "Information"    | 9                   | 24                     | 36                     | 18                     | 4                       | 91           |
|                               | "No Information" | 71                  | 49                     | 27                     | 6                      | 1                       | 154          |

\*Pooling the two extreme categories in each case yielded  $\chi^2=40.27$ ,  $df=2$ ,  $P<.01$  for "weapons", and  $\chi^2=45.31$ ,  $df=2$ ,  $P<.01$  for "tactics."

### Appendix 3

#### Number of "Information" Sources Under Each Experimental Condition

Scores are the number of sources experimentally classified as having sufficient information to warrant interrogation. These classifications were based on the final check by reviewing recordings of those screenings where interrogator classification differed from the classification criterion and making corrections as was necessary.

Maximum possible number for each interrogator under each condition was 24.

| ORDER | IFW | Technique  |       |        | Total |
|-------|-----|------------|-------|--------|-------|
|       |     | Individual | 4-man | 12-man |       |
| 1     | 1   | 11         | 4     | 7      | 22    |
|       | 2   | 13         | 8     | 7      | 28    |
| 2     | 3   | 6          | 9     | 9      | 24    |
|       | 4   | 3          | 10    | 10     | 23    |
| Total |     | 33         | 31    | 33     |       |

#### Analysis of Variance Summary Table

| Source             | SS    | df | MS    | F     | P    |
|--------------------|-------|----|-------|-------|------|
| Order              | .75   | 1  | .75   | .24   | NS   |
| Error <sub>1</sub> | 6.17  | 2  | 3.08  |       |      |
| Technique          | .67   | 2  | .34   | .15   | NS   |
| Tech x Order       | 74.00 | 2  | 37.00 | 15.88 | <.05 |
| Error <sub>2</sub> | 9.33  | 4  | 2.33  |       |      |
| Total              | 90.92 | 11 |       |       |      |

Appendix 3 (continued)

Individual Comparisons (Scheffé's Procedure)

| Comparison         | A  | F   | F'.05 | P  |
|--------------------|----|-----|-------|----|
| I vs 4-man group   | .5 | .21 | 13.88 | NS |
| 4- vs 12-man group | .5 | .21 | 13.88 | NS |

## Appendix 4

### Instructions for Interrogators

At this time I'd like to tell you in greater detail just how the research will proceed. The program will run four consecutive days. On each of these days each of you will see 18 men. Each day, some, but not all, of these men will have valuable military information of a kind and in a quantity which would ordinarily warrant their being interrogated, at least at a low tactical level. It will be your job, using whatever techniques you care to employ, to decide, on the basis of their having information on weapons and tactics studied by Combat Developments Experimentation Center, which men you as a screener would send on for interrogation. You will get no feedback on the accuracy of your classifications until the end of the experiment.

On different occasions - and these will be specified in advance to you - you will screen under varying conditions. That is, at some times you will see men individually, at other times you will see men in groups of four, and at still other times, in groups of 12. The men you see will all be cooperative and will answer your questions as best they can. They will not, of course, be free to reveal classified information to you.

As I said before, you will be free to use any approach you like. However, there are two restrictions. First, when you are screening men in groups, you may not proceed as if it were a series of individual screenings. That is, you cannot deal with the men in groups, sequentially, on an individual basis. Secondly, you may not ask men to identify which other men they know.

You will be allowed up to 15 minutes with each man. In the case of 4-man groups, this means up to an hour, or with 12-man groups up to three hours. You may spend less time if you choose; these are simply the maximum times which will be available to you.

All of the screenings will be tape recorded and some of them will be monitored by television. When you have come to a decision, indicate this in your conversation if you haven't already done so, and release your source or groups of sources, by sending them out to the porch. If you want to take a break between sources, just say so and the tape operator will have your next source delayed. You will be cued over the intercom 5 minutes before the time is up and at the end of your allotted time period by a tapping sound over the speaker.

After you release a source or group of sources, you will indicate your decision, your confidence in your decision, and your reasons for the decision on forms that we will provide for you.

Appendix 4 (continued)

In sum, then, you will see 18 men a day for each of four days, some men individually, others in groups of four or 12. You may take up to 15 minutes with each person, or a proportional time when you have groups, to come to a decision, by any method or technique you choose, as to whether each man does or does not have military information in sufficient quantity of sufficient value to warrant interrogation. And you will be asked to describe whatever reasons you have for your decisions.

Do you have any questions about procedure? You will be completely debriefed after the experiment about the research.

## Appendix 5

### Instructions for Sources (Given by Lt. Col. Green)

(morning )

Good (afternoon), gentlemen. I am Col. Green, Military Chief of the Human Research Unit here at the Presidio, which does research for the Army. You are taking part today in a research program designed to investigate interview techniques and interrogator skill. You are not being tested or evaluated in any way and your performance here will have no bearing on your career in the Army. You are simply to cooperate with the interviewers. They will probably ask you a variety of questions, for example, what training you have had, what your duties are, what weapons you have worked on. Answer honestly and to the best of your ability. However, if you have any classified information, do not discuss it. You are to observe your ordinary security regulations at all times. The interrogators know this and will not attempt to obtain classified information from you. One further exception is that you are not to identify men you know or work with as such. For example, if you should be asked who in the group worked on a particular weapon with you, simply say you cannot answer. The interrogators should not ask you such a question, but if they do, simply say you cannot tell them. Otherwise, please be completely cooperative with them.

Some of you will be interviewed individually, some of you in groups of four, and some of you in groups of 12. The interviews will vary in length - some will last longer than others. You may notice microphones in the interview rooms. All of the interviews will be tape recorded so that they may be analyzed for research purposes. Only the research staff will have access to these records, and you will not be identified as individuals.

When you have all been interviewed, there will be a debriefing, at which time we'll answer any questions you may have about the research. After the debriefing, you will return to Fort Ord, in time for chow. At this time, however, do you have any questions about what you are to do? Remember, you are not being tested in any way. Simply cooperate with the interrogators as best you can. However, do not discuss classified material - the interrogators will not attempt to have you do so - and do not identify people you know or work with.

Pvt. Case, here, will be handling administrative detail. He will direct you to the interviews, which will take place in the building at the foot of the hill. At the conclusion of the interviews, you will return to this building. When you return here you are to remain separate from those who have yet to be interviewed. You are to stay at this end of the building. Those of you who are waiting to be interviewed will remain in the far end of the building near the door. Before and after your interviews, you will be free to read, play cards, and watch TV.

## Appendix 6

### Debriefing for Sources (Given by Lt.Col. Green)

Now that we are all finished for this session, I'd like to thank you very much for your cooperation. The research we are doing on efficiency of interviewing techniques has to do with the relative effectiveness of different kinds of techniques used under different conditions, specifically under the conditions of various group sizes - individual, four- or twelve-man groups.

This work is concerned with how group size affects the acquisition of kinds and amounts of information obtained. We realize that, depending on scheduling, some of you have had waiting periods of some length, which we tried to make as pleasant as possible for you. We appreciate your patience and cooperation.

# Appendix 7

## Analysis of Corrected Accuracy Scores

Scores are the number of correct classifications by each interrogator under each condition - corrected. Maximum possible score was 24.

| ORDER | IPW | Technique  |       |        | Total |
|-------|-----|------------|-------|--------|-------|
|       |     | Individual | 4-man | 12-man |       |
| 1     | 1   | 17         | 19    | 17     | 53    |
|       | 2   | 16         | 23    | 23     | 62    |
| 2     | 3   | 15         | 17    | 15     | 47    |
|       | 4   | 18         | 20    | 15     | 53    |
| Total |     | 66         | 79    | 70     |       |

## Analysis of Variance Summary Table

| Source             | SS    | df | MS    | F    | P  |
|--------------------|-------|----|-------|------|----|
| Order              | 18.75 | 1  | 18.75 | 1.92 | NS |
| Error <sub>1</sub> | 19.50 | 2  | 9.75  |      |    |
| Technique          | 22.17 | 2  | 11.08 | 2.77 | NS |
| Tech x Order       | 12.50 | 2  | 6.25  | 1.56 | NS |
| Error <sub>2</sub> | 16.00 | 4  | 4.00  |      |    |
| Total              | 88.92 | 11 |       |      |    |

Appendix 7 (continued)

Individual Comparisons (Scheffé's Procedure)

| Comparison         | A     | F    | F'    | P  |
|--------------------|-------|------|-------|----|
| I vs 4-man group   | 21.12 | 5.28 | 13.0  | NS |
| 4- vs 12-man group | 10.12 | 2.53 | 13.88 | NS |
| I vs 12-man group  | 2.00  | .50  | 13.88 | NS |

## Appendix 8

### Analysis of Uncorrected Accuracy Scores

Scores are the number of correct classifications by each interrogator under each condition - uncorrected. Maximum possible score was 24.

| ORDER | IPW | Technique  |       |        | Total |
|-------|-----|------------|-------|--------|-------|
|       |     | Individual | 4-man | 12-man |       |
| 1     | 1   | 16         | 17    | 16     | 49    |
|       | 2   | 16         | 21    | 21     | 58    |
| 2     | 3   | 14         | 14    | 13     | 41    |
|       | 4   | 13         | 19    | 15     | 47    |
| Total |     | 59         | 71    | 65     |       |

### Analysis of Variance Summary Table

| Source             | SS    | df | MS    | F    | P  |
|--------------------|-------|----|-------|------|----|
| Order              | 30.08 | 1  | 30.08 | 3.09 | NS |
| Error <sub>1</sub> | 19.50 | 2  | 9.75  |      |    |
| Technique          | 18.00 | 2  | 9.00  | 2.25 | NS |
| Tech x Order       | 2.67  | 2  | 1.34  | .34  | NS |
| Error <sub>2</sub> | 16.00 | 4  | 4.00  |      |    |
| Total              | 86.25 | 11 |       |      |    |

Appendix 8 (continued)

Individual Comparisons (Scheffé's Procedure)

| Comparison         | A     | F    | F'.05 | P  |
|--------------------|-------|------|-------|----|
| I vs 4-man group   | 18.00 | 4.50 | 13.88 | NS |
| 4- vs 12-man group | 4.50  | 1.12 | 13.88 | NS |
| I vs 12-man group  | 4.50  | 1.12 | 13.88 | NS |

## Appendix 9

### Analysis of "Time in Screening" Scores

Scores are the total number of minutes spent by each interrogator under each condition interviewing 24 sources. At 15 minutes per source, the maximum permissible time per interrogator, under each condition, was 360 minutes.

| ORDER | IPW | Technique  |       |        | Total |
|-------|-----|------------|-------|--------|-------|
|       |     | Individual | 4-man | 12-man |       |
| 1     | 1   | 154        | 96    | 127    | 377   |
|       | 2   | 181        | 112   | 75     | 368   |
| 2     | 3   | 160        | 66    | 53     | 279   |
|       | 4   | 184        | 116   | 76     | 376   |
| Total |     | 679        | 390   | 331    |       |

### Analysis of Variance Summary Table

| Source             | SS       | df | MS      | F     | P    |
|--------------------|----------|----|---------|-------|------|
| Order              | 675.00   | 1  | 675.00  | .85   | NS   |
| Error <sub>1</sub> | 1581.67  | 2  | 790.84  |       |      |
| Technique          | 17342.17 | 2  | 8671.08 | 16.79 | <.05 |
| Tech x Order       | 846.49   | 2  | 423.24  | .82   | NS   |
| Error <sub>2</sub> | 2065.34  | 4  | 516.34  |       |      |
| Total              | 22510.67 | 11 |         |       |      |

Appendix 9 (continued)

Individual Comparisons (Scheffé's Procedure)

| Comparison         | A        | F     | F'.05 | P    |
|--------------------|----------|-------|-------|------|
| I vs 4-man group   | 10440.12 | 20.22 | 13.88 | <.05 |
| 4- vs 12-man group | 435.12   | .84   | 13.88 | NB   |
| I vs 12-man group  | 15138.00 | 29.32 | 13.88 | <.05 |